SECTION VIII

GLOSSARY

Antecedent conditions--Initial conditions in catchment as determined from hydrologic events prior to storm.

Biological treatment processes--Means of treatment in which bacterial or biochemical action is intensified to stabilize, oxidize, and nitrify the unstable organic matter present. Trickling filters, activated sludge processes, and lagoons are examples.

Catchment--Surface drainage area.

Combined sewage--Sewage containing both domestic sewage and surface water or stormwater, with or without industrial wastes. Includes flow in heavily infiltrated sanitary sewer systems as well as combined sewer systems.

Combined sewer--A sewer receiving both intercepted surface runoff and municipal sewage.

Combined sewer overflow--Flow from a combined sewer in excess of the interceptor capacity that is discharged into a receiving water.

Conservative--Non-interacting substance, undergoing no kinetic reaction; examples are salinity, total dissolved solids, total nitrogen, total phosphorus.

Convective Precipitation--Precipitation caused by lifting due to convective currents, as in thunderstorms.

Cyclonic Precipitation--Precipitation caused by lifting associated with junctions of different air masses, as for instance, with most warm and cold fronts.

Depression Storage--Amount of precipitation which can fall on an area without causing runoff.

Detention--The slowing, dampening, or attenuating of flows either entering the sewer system or within the sewer system by temporarily holding the water on a surface area, in a storage basin, or within the sewer itself.

Domestic sewage--Sewage derived principally from dwellings, business buildings, institutions, and the like. It may or may not contain groundwater.

Economies of scale--Unit costs decrease as output increases.

Equalization--The averaging (or method for averaging) of variations in flow and composition of a liquid.

Expansion path--Locus of points connecting numerous isoquants indicating the optimal combination of inputs.

First flush--The condition, often occurring in storm sewer discharges and combined sewer overflows, in which a disproportionately high pollutional load is carried in the first portion of the discharge or overflow.

Frequency diagram--Curve which relates the number of occurences of events to their magnitude.

Initial abstraction--Initial precipitation loss including interception and depression storage.

In-system--Within the physical confines of the sewer pipe network.

Interception--Initial lost of precipitation due to vegetation.

Isocost Lines--Lines of equal cost.

Isoquants--Curves representing combinations of the inputs yielding the same amount of output.

Non-conservative--substance undergoing kinetic interaction, assumed to be a first-order reaction; examples are biochemical oxygen demand (BOD), coliform bacteria, dissolved oxygen (DO).

Orographic Precipitation--Precipitation caused by lifting of an air mass over mountains.

Orthophospate--Phosphate that appears as $PO_4^{=}$, HPO_4^{-} or H_2PO_4, i.e. is hydrolizable. Creates a growth response in algae.

Physical-chemical treatment processes--Means of treatment in which the removal of pollutants is brought about primarily by chemical clarification in conjunction with physical processes. The process string generally includes preliminary treatment, chemical clarification, filtration, carbon adsorption, and disinfection.

Pollutant--Any harmful or objectionable material in, or change in, physical characteristic of water or sewage.

Precipitation event--A precipitation event terminates if zero rainfall has been recorded for the previous specified time interval.

Primary treatment--Process which removes about 35% of the biochemical oxygen demand of the waste.

Retention--The prevention of runoff from entering the sewer system by storing on a surface area or in a storage basis.

Runoff coefficient--Fraction of rainfall that appears as runoff after subtracting depression storage and interception. Typically accounts for infiltration into ground and evaporation.

Sanitary sewer--A sewer that carries liquid and water-carried wastes from residences, commercial buildings, industrial plants, and institutions, together with relatively low quantities of ground, storm, and surface waters that are not admitted intentionally.

Secondary treatment--Process which removes about 85% of the biochemical oxygen demand of the waste.

Sewer--A pipe or conduit generally closed, but normally not flowing full, for carrying sewage or other waste liquids.

Sewerage--System of piping, with appurtenances, for collecting and conveying wastewaters from source to discharge.

Storm flow--Overland flow, sewer flow, or receiving stream flow caused totally or partially by surface runoff or snowmelt.

Storm sewer--A sewer that carries intercepted surface runoff, street wash and other wash waters, or drainage, but excludes domestic sewage and industrial wastes.

Storm sewer discharge--Flow from a storm sewer that is discharged into a receiving water.

Stormwater--Water resulting from precipitation which either percolates into the soil, runs off freely from the surface, or is captured by storm sewer, combined sewer, and to a limited degree, sanitary sewer facilities.

Surface runoff--Precipitation that falls onto the surfaces of roofs, streets, ground, etc., and is not absorbed or retained by that surface, thereby collecting and running off.

Tertiary treatment--Process which removes about 96% of the biochemical oxygen demand of the waste.

Urbanized area--Central city, or cities, and surrounding closely settled territory. Central city (cities) has population of 50,000 or more. Peripheral areas with population density of 1,000 persons per acre or more are included.

Urban runoff--Surface runoff from an urban drainage area that reaches a stream or other body of water or a sewer.

Wastewater--The spent water of a community.